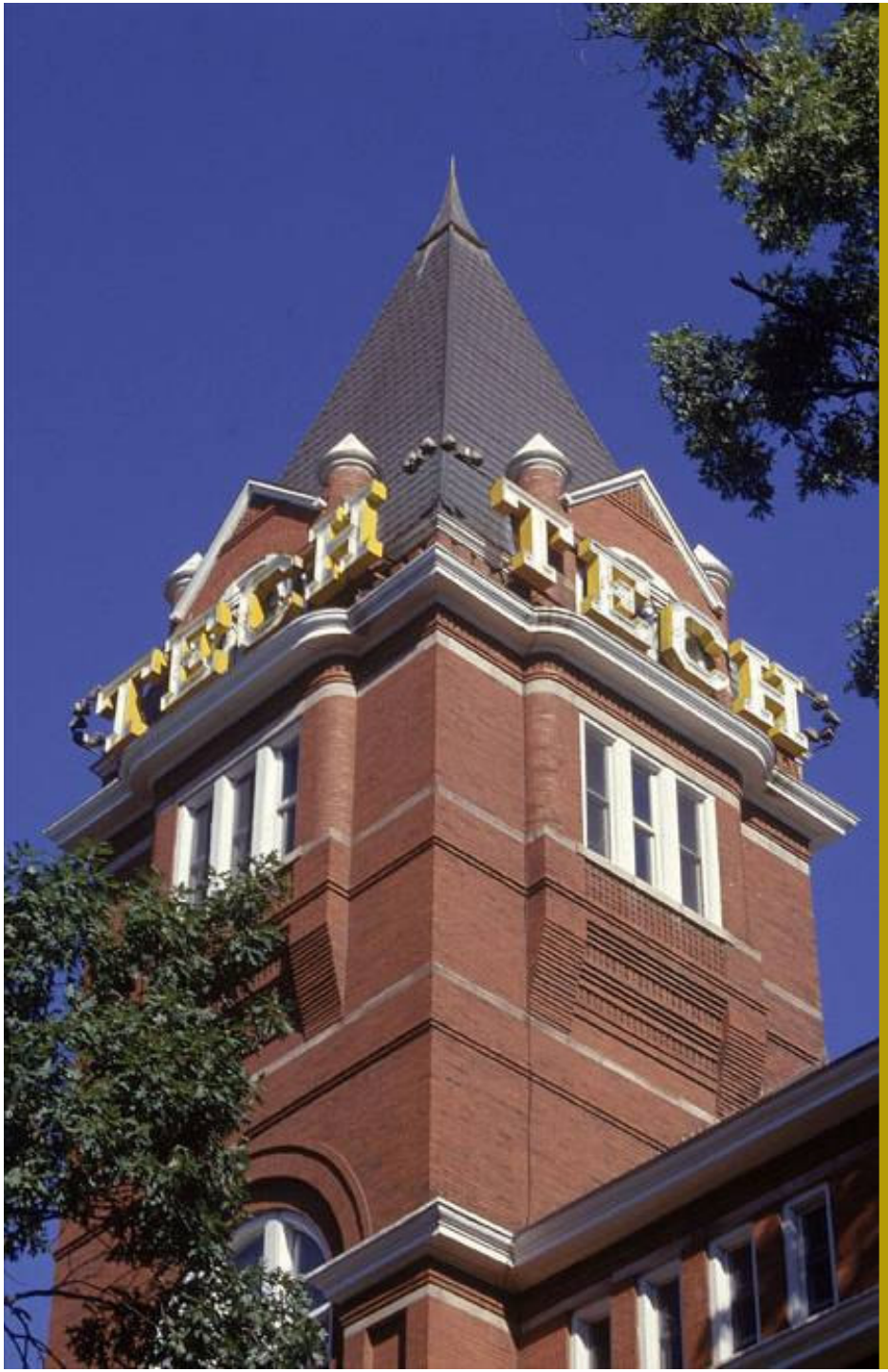


Campus Update

G. Wayne Clough
President

Georgia Tech Advisory Board
April 14, 2008

New developments

- Enrollment exceeds 18,700
  - Retaining more undergraduates
  - Attracting more grad students
- Research expenditures reach $473 million; among top 10 universities with no medical school.
- Formal MOU's signed with six USG schools and GT Savannah.
- Women's tennis wins second national indoor title.
- Campaign passes halfway mark.

Students win national honors

Andrew Marin, Gates Cambridge Scholar

Inn Inn Chen, Marshall Scholar

Adam Tart, George Mitchell Scholar

Jessica Heier featured in *USA Today* for work in humanitarian relief logistics.

Reeve Ingle, 2007 Co-op Student of the Year

GT Promise students doing well

- After first semester, more than half of the 197 GT Promise recipients achieved a GPA above 3.0.
- 10 recipients (5 percent) have GPA of 4.0.
- Only 9 recipients have a GPA below 2.0. Now meeting with these students individually to develop a plan of action.
- Have raised $15 million of the $50 million goal for the endowment to support GT Promise.

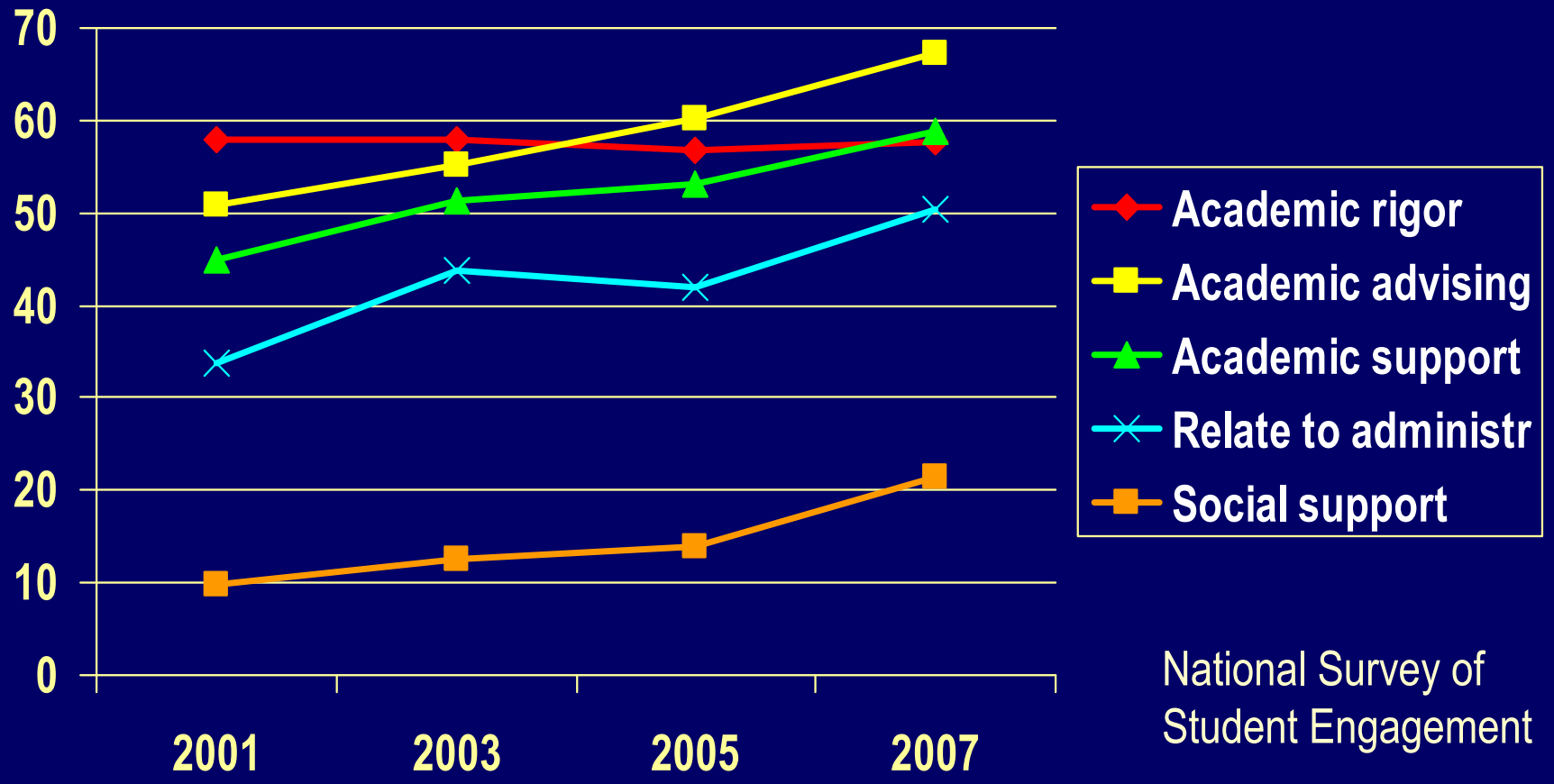
National attention for college costs

- Georgia Tech/GTF respond to information request from U.S. Senate Finance Committee.
- Marie Mons presents public college perspective at a meeting of key U.S. Senate staff directors.
- Georgia Tech listed as 12th "best value" in nation by *Kiplinger's* Magazine
- Ivies up the ante: Students with family income up to $60,000 - $100,000 attend free; graduated tuition rates for family incomes as high as $200,000:

Princeton	Stanford	Dartmouth
Harvard	Yale	Brown

Undergraduate Initiative bears fruit

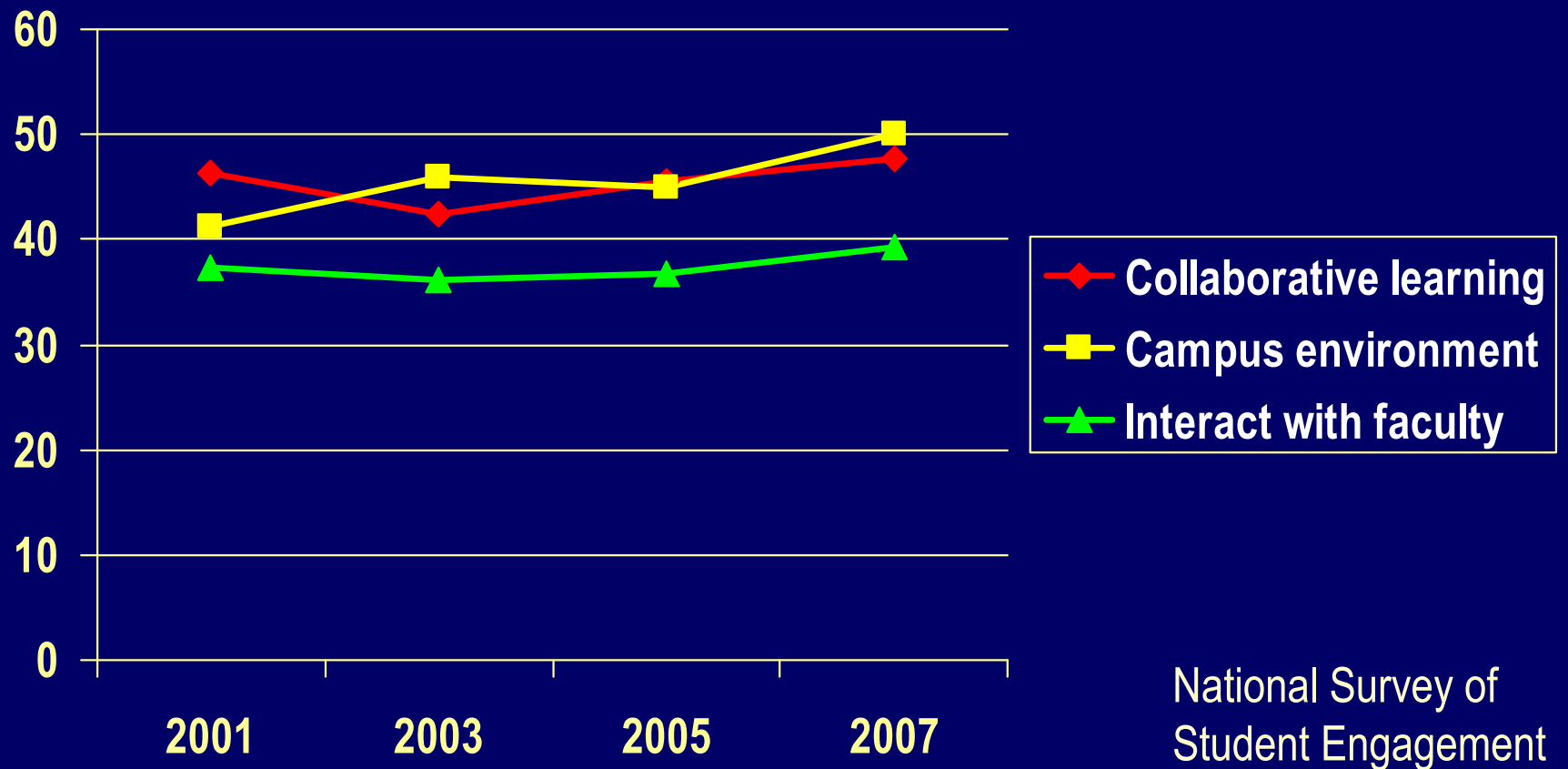
Percent of seniors who think Georgia Tech does well



National Survey of Student Engagement

But more remains to be done

Percent of seniors who think Georgia Tech does well



National Survey of Student Engagement

Changing of the guard

- Gary Schuster is named interim president.
- Bob Thompson retired April 1.
- Steve Swant succeeds him.
- ME Professor Ray Vito becomes first Vice Provost for Graduate and Undergraduate Studies.
- Bill Wepfer becomes chair of Woodruff School of Mechanical Engineering.

Faculty honors

Elliott Moore, electrical and computer engineering professor at GT Savannah, wins Presidential Early Career Award for Scientists and Engineers (PECASE) .

Four faculty named Fellows of the American Association for the Advancement of Science:

Rick Trebino, School of Physics

Cheryl Leggon, School of Public Policy

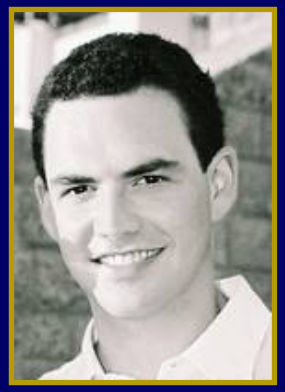
Randolph Engle, chair, School of Psychology

Judith Curry, chair, School of Earth and Atmospheric Sciences

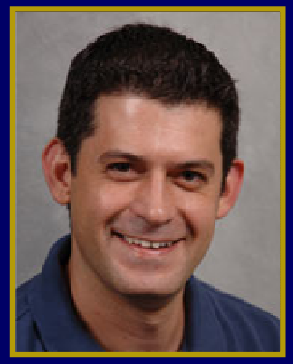
Sloan Awards

Nicholas Feamster
Assistant Professor
Computing

King Jordan
Associate Professor
Molecular Biology



Adam Kalai
Assistant Professor
Computing



Danny Breznitz
Assistant Professor
International Affairs
Public Policy

More NAE members

James Foley
Fleming Chair
Computing

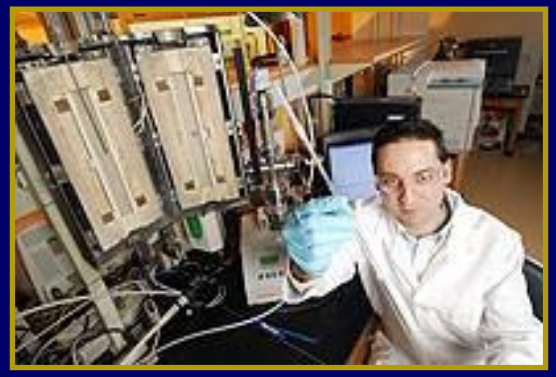
Elsa Reichmanis
Professor
Chemical & Biomolecular Engineering

Expanding medical collaborations

- Emory Healthcare:
  - NIH Nanomedicine Centers: cancer, cardiac, DNA/RNA repair (includes Medical College of Georgia)
  - Predictive Health Institute
  - Surgical theater and neuro unit design
- Children's Healthcare of Atlanta:
  - Joint Health Systems Institute
  - Joint Center for Pediatric Outcomes and Quality
- St. Joseph's Hospital:
  - Translational Research Institute to be located in TEP
  - Collaborative research and reciprocal faculty appointments
- Piedmont Hospital and a dozen others: improving administrative procedures

Carbon in the research spotlight

Bill Koros gets $10 million grant from KAUST for research in hydro-carbons from oil and natural gas.



New material absorbs high capacities of carbon dioxide, is reusable.

Georgia Tech wins 2008 College and University Recycling Award for recycling 376 tons of paper last year.

Building a global university

- India: Considering establishing 250-acre campus site
- China: Joint degree program with Peking University before Board of Regents. Coulter Foundation funds joint research projects at PKU.
- South Africa: Joint degree program in civil and environmental engineering with University of Pretoria.
- Saudi Arabia/Abu Dhabi: Possible joint research centers
- Panama: Discussions with OAS, Panama government regarding logistics presence at Panama Canal
- Costa Rica: Advanced search engine for biodiversity research

Georgia Tech fares well in tight state budget

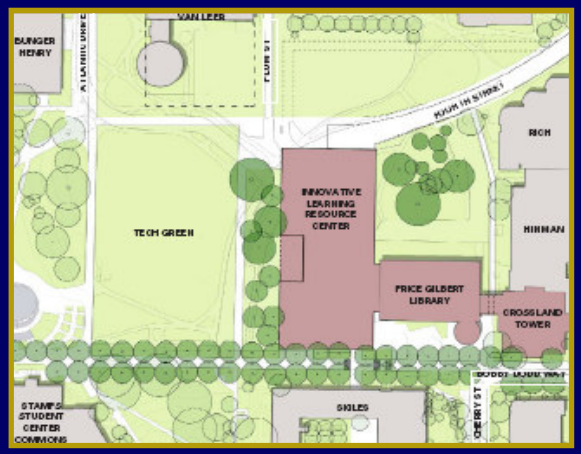
- Tech capital projects: $16.4 m
  - Innovative Learning Resource Center $10.0 m
  - Renovation of Hinman Building $ 6.4 m
- Systemwide allocations:
  - 2.5 percent pay raise
  - Full funding for formula $115 m
  - Major repair & rehabilitation $ 60 m

Innovative Learning Resource Center

- $85 million facility
  - $60 million state funds
  - $25 million Georgia Tech
- Construction can begin soon
  - Tech has already expended $1.7 million of its own funds
  - Site evaluation and surveys, utility relocation engineering, are complete. Design is underway.
- Seeking $10.2 million in FY 2009 budget:
  - $4.4 million to complete design and engineering
  - $5.8 million for site clearance and preparation

Innovative Learning Resource Center

8 chemistry labs
8 physics labs
5 biology labs
3 earth/atmospheric science labs
15 classrooms
2 large lecture halls (250, 500 seats)
Information Commons
Student services

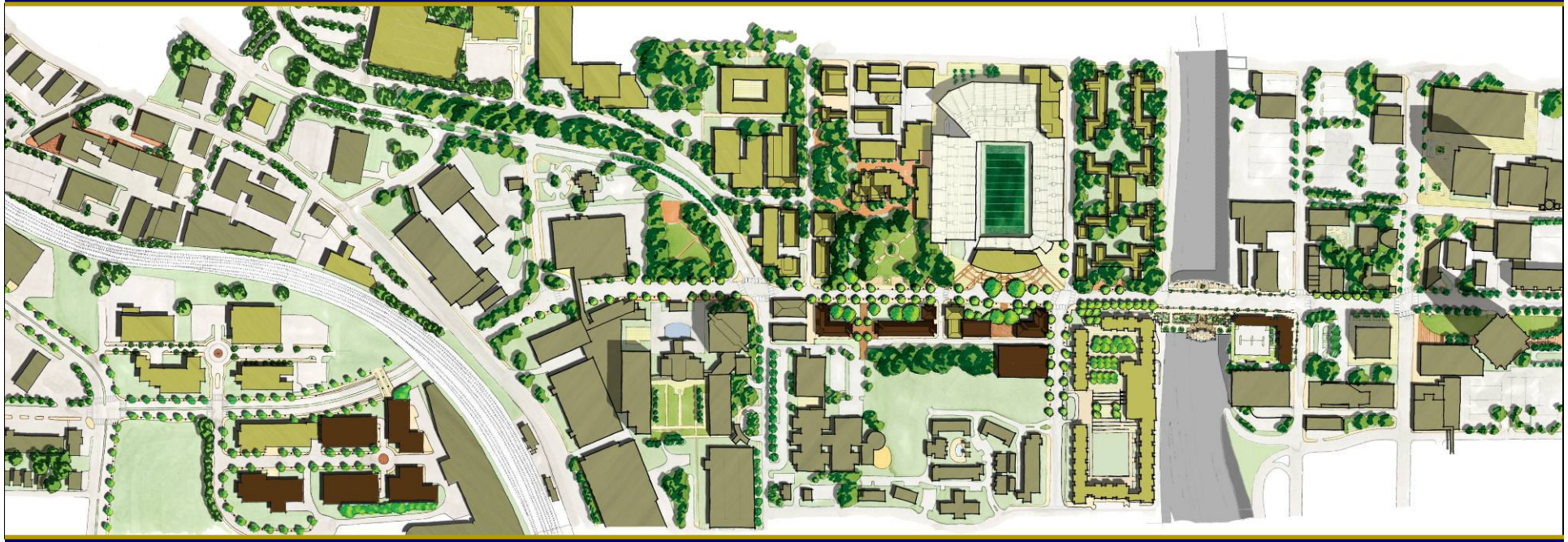


Marcus Nanotechnology Building

Now in the “clean construction” stage with extraordinary measures to control dust and dirt.

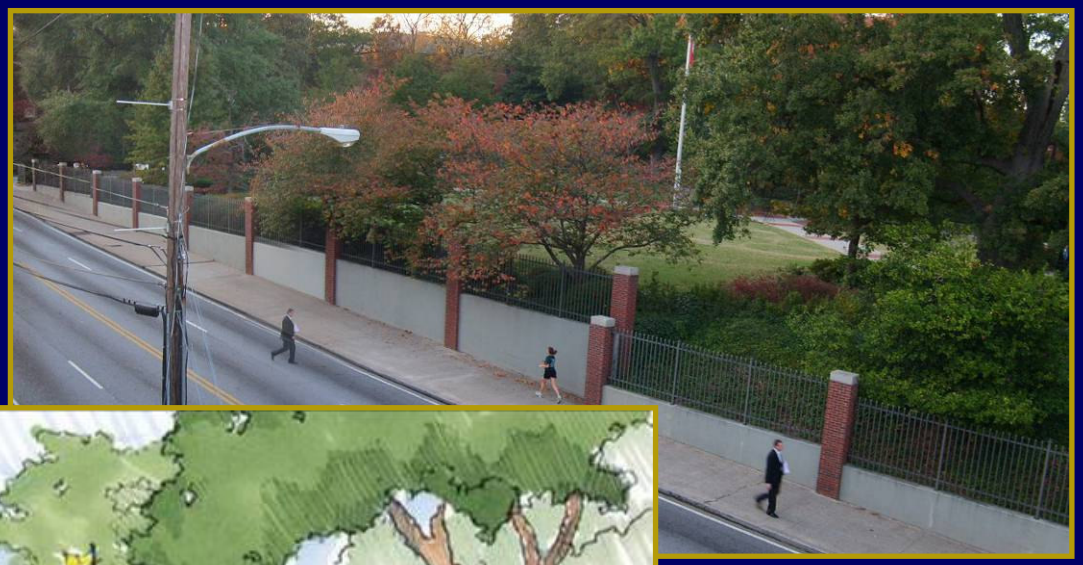
On schedule for completion in October 2008.

Transforming North Avenue from a road to a boulevard



- Expanding campus to the south side.
- Street-scaping the North Avenue corridor to incorporate it more fully into campus and reinforce Georgia Tech's identity.
- Improving transportation flow.

Opening the Tech Lawn



Chihuly glass adds beauty to atrium at College of Management

Growing a stronger STEM*

- The American scientific and technological workforce is largely white males and is rapidly approaching retirement age.
- To remain competitive, the American economy may need more scientists and engineers.
- Too few high school students are interested or do well in math and science, and too few qualified high school teachers are available.

*Science, technology, engineering, mathematics

Rising workforce needs

- From 1990 to 2000, job growth in science and engineering occupations was triple that of other occupations.
- In 2003, 26 percent of the science and engineering workforce and 40 percent of the PhDs within that workforce were age 50 or above.

2008 Science & Engineering Indicators
National Science Foundation

The 2005-06 Lemelson-MIT survey

- American teenagers are comfortable with rapid technological change and optimistic about technology's ability to solve problems, but they are not interested in science/technology careers.
- "We need to do more to make science and technology more attractive to today's youth."

Merton Flemings, director
Lemelson-MIT Invention Program

Algebra: The key to college

"The probability that a student will enroll in a four-year college correlates substantially with completion of high school mathematics programs beyond the level of Algebra II. In fact, students who complete Algebra II are more than twice as likely to graduate from college as students who lack such preparation."

Report of the National Mathematics Advisory Panel, March 2008

"Currently only about 22 percent of Georgia's [high school] graduates complete Algebra II."

Paul Ohme, Georgia Tech's CEISMC

Hurdles to overcome

"About 30 percent of high school mathematics students and 60 percent of those enrolled in physical science have teachers who either did not major in the subject in college or are not certified to teach it."

Rising Above the Gathering Storm

At the beginning of the 2003-04 school year, 74 percent of U.S. public secondary schools reported vacancies for math teachers and more than 50 percent reported vacancies in the sciences. Close to a third with vacancies in math or physical science found them difficult or impossible to fill.

2008 Science & Engineering Indicators
National Science Foundation

How can Georgia Tech help?

- Framing the discussion
  - National perspective
  - Role of research universities in Georgia
- What is Georgia Tech doing?
  - CEISMC
  - STEM
  - Pre-College Teaching Career Program